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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,125	07/15/2003	Toshihiro Horiuchi	NEC 210201	7847
27667	7590	01/25/2005	EXAMINER	
HAYES, SOLOWAY P.C. 130 W. CUSHING STREET TUCSON, AZ 85701			NGUYEN, THANH NHAN P	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N	Applicant(s)	
	10/620,125	HORIUCHI ET AL.	
	Examiner	Art Unit	
	(Nancy) Thanh-Nhan P Nguyen	2871	

-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-5 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/15/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because in fig. 3B, reference characters "2" and "101" have both been used to designate "lower plate 101"; reference characters "3" and "103" have both been used to designate "upper plate 103". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al U.S. Patent No. 5,929,962 in view of Vu et al U.S. Patent Application Publication No. 2001/0040644, and further in view of Sampica et al U.S. Patent No. 5,592,288.

Referring to claim 1, Chiu et al discloses a method for manufacturing a liquid crystal display device, comprising a step of disposing first substrate and second substrate aligned with each other while sealing material there between, [see fig. 3, "440"; col. 2, lines 35-39]; a step of curing sealing material to attach first substrate and second substrate to each other via sealing material, [see fig. 3, "490"; col. 4, lines 65].

Chiu et al lacks disclosure of a step of pressing a first substrate and a support substrate against each other under vacuum condition.

Vu et al discloses of a step of pressing a first substrate and a support substrate against each other under vacuum condition for the benefit of degassing to eliminate all bubbles between substrates, [see figs. 6A-6D; par. 0069]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to press a first substrate and a support substrate against each other under vacuum condition for the benefit of degassing to eliminate all bubbles between substrates.

Still referring to claim 1, Chiu et al further lacks disclosure of a step of breaking vacuum conditions and transferring first substrate and support substrate into an external atmospheric pressure environment while keeping first substrate and support substrate

being pressed against each other to attach first substrate and support substrate to each other.

Sampica et al discloses a step of removing assembly 745 from apparatus 700, [see fig. 7], for the benefit of having an improving optical component assembly, [see col. 7, lines 20-29], and being ready to attach to a LCD panel, [see col. 7, lines 13-18]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to break vacuum conditions and transfer first substrate and support substrate into an external atmospheric pressure environment while keeping first substrate and support substrate being pressed against each other to attach first substrate and support substrate to each other for the benefit of having an improving optical component assembly, being available as a component of the LCD, or being ready to attach to a LCD panel.

Allowable Subject Matter

Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of prior art taught or disclosed a step of pressing first substrate and support substrate against each other (under vacuum conditions) so that a surface of an alignment film formed on first substrate and a roughened surface formed on press tool

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disposed to face each other; a step of removing support substrate from first substrate after the step of curing sealing material to attach first substrate and second substrate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chiu et al U.S. Patent No. 5,929,962 discloses a step of aligning first substrate and second substrate to each other while interposing a sealing material therebetween.

Vu et al U.S. Patent Application Publication No. 2001/0040644 discloses a step of pressing first substrate and support substrate against each other under vacuum conditions.

Sampica et al U.S. Patent No. 5,592,288 a step of breaking vacuum conditions and transferring the optical component assembly to atmospheric pressure environment to attach to the LCD panel.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 21, 2005

TN



Kenneth L. Park
Pat. Examiner
G0603011